

In the Claims

No claims are being amended by the present Reply. The following listing of claims is being provided for the convenience of the Examiner. Applicant respectfully reserves the right to prosecute any originally presented claims in a continuing or future application.

1. (Previously Presented) A method of managing a virtual content repository (VCR) that represents a plurality of content repositories, the method comprising:

creating at least one content node for each of the plurality of content repositories and associating each content node with its own schema, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

creating a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

organizing the content and hierarchy nodes into a hierarchy in the VCR, and for each hierarchy node

associating the hierarchy node with an identifier that specifies its path location within the VCR,

associating the hierarchy node with at least one parent content node and one or more child content nodes, and

applying the hierarchy node's schema to each of the child content nodes;  
storing the hierarchy and content nodes in the VCR; and

presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein each of the schemas remain associated with their respective nodes.

2. (Previously Presented) The method of claim 1 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

3. (Previously Presented) The method of claim 2 wherein:

the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

4. (Previously Presented) The method of claim 1 wherein:  
the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.
5. (Previously Presented) The method of claim 2 wherein:  
each property comprises at least one property definition.
6. (Previously Presented) The method of claim 5 wherein:  
the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,  
whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

7-48. (Canceled).

49. (Previously Presented) The method of claim 1 wherein:  
the identifier is a path.

50-52. (Canceled).

53. (Previously Presented) A method of managing a virtual content repository (VCR) that represents a plurality of content repositories, the method comprising:  
creating at least one content node for each of the plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories and wherein each content node is associated with its own schema;

creating a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

organizing the content and hierarchy nodes into a hierarchy in the VCR;

associating each hierarchy node in the hierarchy with an identifier that specifies its path location in the VCR;

associating each hierarchy node with at least one parent content node and with one or more child content nodes;

applying each hierarchy node's schema to each of its child content nodes;

storing the hierarchy and content nodes in the VCR; and

presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the each of the schemas remain associated with their respective nodes.

54. (Previously Presented) The method of claim 53 further comprising:

associating each hierarchy node with its own hierarchy schema; and

associating each content node with its own content schema.

55. (Canceled).

56. (Previously Presented) The method of claim 54 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

57. (Previously Presented) The method of claim 56 wherein:

the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

58. (Previously Presented) The method of claim 53 wherein:

the application program interface comprises integrating one or more of a VCR browser, a content node editor, a schema editor and a property editor.

59. (Previously Presented) The method of claim 56 wherein:

each property comprises at least one property definition.

60. (Previously Presented) The method of claim 59 wherein:  
the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,  
whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

61. (Canceled).

62. (Previously Presented) The method of claim 53 further comprising:  
searching for one of a hierarchy node and a content node returning a selected node; and  
performing an operation on the selected node, the operation comprising one of deleting  
the selected node, changing the location of the selected node in the VCR, reading the selected  
node, and updating the selected node.

63-66. (Canceled).

67. (Previously Presented) A system of managing a virtual content repository (VCR) that  
represents a plurality of content repositories, the system comprising:  
a plurality of content repositories, wherein each of the plurality of content repositories  
includes content that is unique from content in the other content repositories;  
at least one content node created for each of the plurality of content repositories, each  
content node comprising a schema associated with the content node;  
a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or  
more of the content nodes, and wherein each hierarchy node is also associated with its own  
schema;

a hierarchy of the content and hierarchy nodes created in the VCR, each hierarchy node comprising

an identifier that specifies its path location within the VCR,

an association with at least one parent content node and one or more child content nodes, and

wherein the hierarchy node's schema is applied to each of the child content nodes;

an application program interface to which the plurality of content repositories associated with the content nodes of the VCR is presented as a single content repository; and

wherein each of the hierarchy and content nodes are stored in the VCR and wherein each of the schemas remain associated with their respective nodes.

68. (Previously Presented) The system of claim 67 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

69. (Previously Presented) The system of claim 68 wherein:

the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

70. (Previously Presented) The system of claim 67 wherein:

the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.

71. (Previously Presented) The system of claim 68 wherein:

each property comprises at least one property definition.

72. (Previously Presented) The system of claim 71 wherein:

the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,

whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

73. (Previously Presented) The system of claim 67 wherein:  
the identifier is a path.
74. (Previously Presented) The system of claim 67 further comprising:  
a search for one of a hierarchy node and a content node that returns a selected node;  
and  
an operation performed on the selected node, the operation comprising one of: a deletion of the selected node; a change of the selected node location in the VCR; a reading of the schema associated with the selected node; and an update of the schema associated with the selected node.
75. (Previously Presented) A computer readable storage medium for managing on a virtual content repository (VCR) that represents a plurality of content repositories, the computer readable medium having instructions stored thereon that when executed by one or more processors on the computer cause the computer to:
  - create at least one content node for each of the plurality of content repositories and associate each content node with its own schema, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;
  - create a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;
  - organize the content and hierarchy nodes into a hierarchy in the VCR, and for each hierarchy node
    - associate the hierarchy node in the hierarchy with an identifier that specifies its path location in the VCR,
    - associate the hierarchy node with at least one parent content node and one or more child content nodes, and
    - apply the hierarchy node's schema to each of the child content nodes;

store the hierarchy and content nodes in the VCR; and  
present the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the schemas remain associated with their respective nodes.

76. (Previously Presented) The computer readable storage medium of claim 75 wherein:  
the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

77. (Previously Presented) The computer readable storage medium of claim 76 wherein:  
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

78. (Previously Presented) The computer readable storage medium of claim 75 wherein:  
the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.

79. (Previously Presented) The computer readable storage medium of claim 76 wherein:  
each property comprises at least one property definition.

80. (Previously Presented) The computer readable storage medium of claim 79 wherein:  
the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,  
whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

81. (Previously Presented) The computer readable storage medium of claim 75 wherein:  
the identifier is a path.

82. (Previously Presented) The computer readable storage medium of claim 75 further comprising:

search for one of a hierarchy node and a content node that returns a selected node; and perform an operation on the selected node, the operation comprising one of: delete the selected node; change the location of the selected node in the VCR; read the schema associated with the selected node; and update the schema associated with the selected node.

83. (Previously Presented) The method of claim 1 further comprising:

searching for one of a hierarchy node and a content node returning a selected node; and performing an operation on the selected node, the operation comprising one of: deleting the selected node; changing the location of the selected node in the VCR; reading the schema associated with the selected node; and updating the schema associated with the selected node.

84. (Previously Presented) A system of managing a virtual content repository (VCR) that represents a plurality of content repositories, the method comprising:

a plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

at least one content node created for each of the plurality of content repositories wherein each content node is associated with its own schema;

a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

a hierarchy of the content and hierarchy nodes created in the VCR, each hierarchy node comprising an identifier that specifies the hierarchy node's path location in the VCR;

wherein each hierarchy node is associated with at least one parent content node and with one or more child content nodes and wherein each hierarchy node's schema is applied to its child content nodes;

storage of the hierarchy and content nodes in the VCR; and

an application program interface that presents the plurality of content repositories associated with the VCR as a single content repository wherein the schemas remain associated with their respective nodes.

87. (Previously Presented) The system of claim 84 further comprising:  
an association of each hierarchy node with its own hierarchy schema; and  
an association of each content node with its own content schema.

86. (Previously Presented) The system of claim 85 wherein:  
the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

87. (Previously Presented) The system of claim 86 wherein:  
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

88. (Previously Presented) The system of claim 84 wherein:  
the application program interface comprises integrating one or more of a VCR browser, a content node editor, a schema editor and a property editor.

89. (Previously Presented) The system of claim 86 wherein:  
each property comprises at least one property definition.

90. (Previously Presented) The system of claim 89 wherein:  
the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,  
whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

91. (Previously Presented) The system of claim 84 further comprising:  
a search for one of a hierarchy node and a content node that returns a selected node;  
and

an operation performed on the selected node, the operation comprising one of: a deletion of the selected node; a change of the selected node location in the VCR; a reading of the selected node; and an update of the selected node.

92. (Previously Presented) A computer readable storage medium for managing a virtual content repository (VCR) that represents a plurality of content repositories, the computer readable medium having instructions stored thereon that when executed by one or more processors on the computer cause the computer to:

create at least one content node for each of the plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories and wherein each content node is associated with its own schema;

create a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

organize the content and hierarchy nodes into a hierarchy in the VCR including associating each hierarchy node with an identifier that specifies its path location in the VCR;

associate each hierarchy node with at least one parent content node and with one or more child content nodes;

applying each hierarchy node's schema to its child content nodes;

store the hierarchy and content nodes in the VCR; and

present the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the schemas remain associated with their respective nodes.

93. (Previously Presented) The computer readable storage medium of claim 92 further comprising:

associate each hierarchy node with its own hierarchy schema; and

associate each content node with its own content schema.

94. (Previously Presented) The computer readable storage medium of claim 93 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

95. (Previously Presented) The computer readable storage medium of claim 94 wherein:  
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

96. (Previously Presented) The computer readable storage medium of claim 92 wherein:  
the application program interface comprises integrating one or more of a VCR browser, a content node editor, a schema editor and a property editor.

97. (Previously Presented) The computer readable storage medium of claim 94 wherein:  
each property comprises at least one property definition.

98. (Previously Presented) The computer readable storage medium of claim 97 wherein:  
the at least one property definition can specify at least one of  
property choices,  
a reference,  
a data type,  
whether each property is mandatory,  
whether each property is multi-valued,  
whether each property is primary,  
whether each property is read-only, and  
whether each property is restricted.

99. (Previously Presented) The computer readable storage medium of claim 92 further comprising:  
search for one of a hierarchy node and a content node that returns a selected node; and  
perform an operation on the selected node, the operation comprising one of: delete the selected node; change the location of the selected node in the VCR; read the selected node; and update the selected node.